

Bulletin

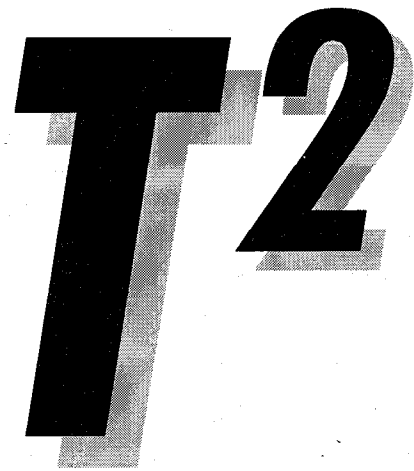
Ideas to Improve Winter Operations on Roads and Streets

(Editor's Note: Following is a list of widgets and gadgets that may make life for equipment operators easier and less stressful this winter. Agency personnel should definitely follow the rules and regulations of their agency, the state, and federal government. This list may provide some things not covered by existing rules or regulations.)

- Heated exterior mirrors.
- Truck bed vibrators to shake material out of bed.
- Welding of bolts on auger cylinder to break up frozen sand.
- Carbide blades for plows/wings.
- Circulating fans in truck cabs.
- Round 8-inch convex mirror on front wing post and below door mirrors.
- Strobe light for center of cab rather than sides.
- High intensity reflective tape on sides and rear of truck bed.
- Rubber guide for wings/plows.
- Use of amber rather than white lights for viewing auger. White lights are for backing.
- Bug deflector used as snow deflector.
- Used rubber conveyor belt material attached to top of plow as snow deflector.
- Nonmetallic spinner for use with calcium chloride.
- Stainless steel drop-in sander units.
- Spotlight to illuminate wing plow.
- Dump box canvas (to keep freezing rain and snow out of material).
- On-board tool and safety equipment:
 - Flashlight.
 - Hammer.
 - Screwdriver.
 - Channel lock pliers.
 - Shovel.
 - Tow chain.
 - Fire extinguisher.
 - Reflective triangles.
 - First aid kit.
 - Disposable mask for CPR. ■

Source: Adapted from Vermont Local Roads, December 1995

**Walkable Communities:
Designing for Pedestrians
Video**
See page 15!



**The Northwest Technology
Transfer Center
TransAid-WSDOT**

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Editor's Column

As winter approaches, we can take time to reflect back on what has been accomplished and to make plans for the upcoming year.

A major survey of our customers this fall provided some excellent comments on our programs and services. We are presently tallying the results which will be used by us to improve our services in 1997. Overall, you, our customer, are very happy with the T² Center giving us many 9s and 10s on a 10-point rating system. We appreciate and thank you for your complimentary evaluations. It makes us feel good that we are responding to your needs in a professional way.

A major milestone in 1996 was the creation of our Associate of Technical Arts in Public Works with a pilot to start in 1996-97 at the South Puget Sound Community College near Olympia. Please refer to page 7 of this newsletter for a more detailed description of this new community program.

We continued to work with you in providing 20 to 40 workshops, 100 plus roadshows. Many of you have requested our technical materials and videos for loan whereby you and your staff can continue to broaden your knowledge. We at the T² Center look forward to another successful year in 1997. Have a good holiday season and a happy new year.



Poll Supports Investment in Highways

A national poll sponsored by the Keep America Moving Coalition finds that 90 percent of Americans support the dedication of the fuel taxes and other highway user fees for highway and bridge improvements.

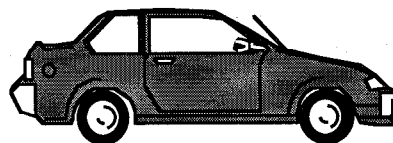
The poll was conducted by Wirthlin Worldwide, and the results were obtained through a telephone survey of 1,011 adults age 18 years or older living in the United States. Among the questions asked in the poll were the preferred mode of travel, positions on the use of fuel taxes and government priorities, and the participants' perception of the interstate highway program.

The major findings of the poll include:

- 86 percent of Americans would more likely support fuel taxes if the tax was dedicated only for highway and bridge improvements;
- 94 percent of Americans feel it is important that their elected officials support fuel taxes and other fees collected from highway users being dedicated only for highway and bridge improvements, with 58 percent believing that these improvements should receive very high or high priority;
- More than two-thirds believe that interstates have enhanced safety and the economy and linked the nation in a positive way, while 18 percent believe that construction of the interstates has divided and isolated communities; and
- 86 percent of Americans prefer travel by car rather than other modes of transportation.

Copies of the survey results are available from the Keep America Moving Coalition at (202) 857-1200. ■

Source: AASHTO Journal, September 20, 1996



Preparing for Floods

By Terry R. Simmonds

Floods claim an average of 263 lives every year in the United States. Some floods develop over a period of days, but flash floods can result in raging waters in just a few minutes. Mud slides may also occur at the same time causing deaths and injuries.

Taking Precaution

Wherever you live, be aware of potential flooding hazards. In a low-lying area, near water or downstream from a dam, be prepared for floods.

Find out if you live in a flood-prone area and the average flood depths in your community. You may need to store materials like sandbags, plywood, plastic sheeting, and lumber to protect your home from flood waters. Contact your insurance agent, Community Planner, or Local Emergency Management Office for more information.

Certain terms describe flooding conditions. These are:

Flood Watch – Rainfall is heavy enough to cause rivers to overflow their banks or melting snow is mixing with rainfall to produce similar effects.

Flood Warning – Flooding will occur and the severity of the flood is described as minor, moderate, or major. Flood warnings will also be forecast when and where the flooding will occur.

Flash Flood Watch – Heavy rains may cause sudden flash flooding in specified areas.

Flash Flood Warning – Flash flooding is occurring or is imminent along certain streams and designated areas.

You should obtain certain basic materials prior to flooding emergencies.

- 1 A stock of food that requires no cooking or refrigeration. Store drinking water in clean, closed containers, like 2-liter pop bottles. Never store water in glass or milk containers.
- 2 A portable, battery-operated radio and flashlights in working order, stock extra batteries. First aid supplies and any medicines your family may need.
- 3 You need to obtain knowledge about the following:

- Dams in your area. Be aware of what could happen if they fail and be familiar with local emergency action plans.
- Your community's flood evacuation routes and where to find high ground. In a flash flood, you may need to seek high ground on foot quickly.
- The elevation of your property in relationship to nearby streams, rivers, lakes, bays, and dam, so that you will know if the flood elevations forecasted will affect your home and property.
- Flood insurance coverage. Flood losses are not covered under typical homeowners' insurance policies.

What to do When Flooding is Likely

- 1 If you see any possibility of a flash flood occurring, move immediately to higher ground. Do not wait for instructions to move. If you are in a flood prone area, be prepared to evacuate and to seek shelter. Listen to the media for information and instructions from local officials.
- 2 If local officials release flood warnings, fill your bathtub with water to ensure that you have an uncontaminated supply in case services are cut off; and in coastal areas, board up windows or protect them with storm shutters. Tape does not protect windows from being broken.
- 3 Put sandbags or other protection in place, based on anticipated flood depths.

Upon Being Advised to Evacuate

- 1 Secure your home before leaving. Move essential items and furniture to the upper floors of your house; lock doors and windows.
- 2 If instructed, turn off utilities at the main switches or valves. Disconnect electrical appliances, but do not touch any electrical equipment if you are wet or standing in water.
- 3 Make sure you have enough fuel in your car. Follow recommended evacuation routes. Leave early enough to avoid being marooned by flooded roads. Be alert

Continued on page 5

In the News

✓ Fatal Accidents Increase

Fatal accidents have increased for the third year, led by rising rates of death due to drunken driving, according to the National Safety Council (NSC).

According to a report by the NSC, a private safety group, alcohol related traffic fatalities rose to 17,274 in 1995, the first increase in a decade. Motor vehicle accidents overall accounted for 43,900 of the nation's 93,300 fatal accidents in 1995. Of that amount, 41 percent were alcohol related according to the NSC. ■

*Source: AASHTO Journal
October 11, 1996*

✓ Dale Poussier and Washington Chapter Take National Awards

Craig Olson and Gwenn Maxfield accepted the "President's Award for Chapter Excellence" at the recent APWA Congress in Washington D.C., where Dale Poussier was also honored with the 1996 Private Sector Service Award. Dale was selected from among a group of national candidates in recognition of professional activities which have enhanced the quality of life through services provided to public agencies. The Washington chapter nominated Dale for this award and emphasized his work developing the 1996 *Standard Specifications for Road,*

Bridge, and Municipal Construction. He has been the chair of this committee since 1990 and has been a participant since 1984. Through his leadership and negotiations with the Washington State Department of Transportation, the committee has developed and implemented a single document of specifications and standards that are used for both state and local agencies. Dale is a transportation project manager with HDR Engineering, Inc. ■

Source: APWA Washington Chapter Newsletter, Fall 1996

✓ Transportation Awards Presented to State DOT Officials

Ten state transportation officials were recognized at the 82nd AASHTO Annual Meeting in Buffalo, New York, for their exemplary services and significant contributions in the development of transportation at the regional or national level.

Rail Transportation – Kenneth N. Uznanski, Jr., of the Washington State Department of Transportation was instrumental in bringing nationwide recognition to WSDOT's rail program. In particular, Uznanski played a key role in the development of the Mount Baker International Train, which marked the return of passenger rail service between Seattle and Vancouver,

British Columbia, after a 14-year absence. In creating Mount Baker International, Uznanski helped forge a partnership among WSDOT, Amtrak, Burlington Northern, U.S. and Canadian Customs and Immigration, Renfe Talgo of America! Inc. and the Province of British Columbia.

Alfred E. Johnson Achievement Award – In recognition of contributions to management of highway engineering, the award was presented to Leslie N. Jacobson of the Washington State Department of Transportation. Jacobson was instrumental in expanding the first ramp metering system in the Seattle area and implementing new technol-

ogy to improve traffic safety, incident management, traveler information services, and other methods of improving freeway capacity and traffic flow without adding new general purpose traffic lanes. He also pioneered the WSDOT Freeway and Arterial Management Effort (FAME). This research and operations program developed the WSDOT incident response system, improved freeway management techniques, and initiated advanced technology and applications that led to the development of the Washington State ITS Program. ■

*Source: AASHTO Journal
October 11, 1996*

for washed out roadways and bridges; many roads parallel streams and other drainage channels and may be swept away or covered by flood waters.

- 4 Tell others where you are going.
- 5 Do not drive into flooded areas. Watch for and avoid mud slides, broken sewers or water mains, loose or downed electric wires and falling or fallen objects, like trees and light poles. Stay away from streams and drainage channels especially in areas known to flood.

After the Flood

- 1 Do not visit disaster areas until authorized to do so.
- 2 Notify your agent if you have flood insurance and suffer a loss.
- 3 Listen to the media for advice and instructions on whether to obtain medical care and where to get assistance for such necessities as housing, clothes, and food.

- 4 Do not enter your home if flood waters are over the first floor, you cannot tell whether the building is safe to enter.
- 5 When examining buildings use battery-powered lanterns or flashlights (not oil or gas lanterns or torches).
- 6 Before using any water, check with local authorities. Water sources including wells are often contaminated by the flood. The water should be tested before drinking.
- 7 Food that has come into contact with flood water may be contaminated.
- 8 Do not handle live electrical equipment in wet areas. Have an expert check all equipment before returning it to service.
- 9 Ask the gas company to check your home for leaks and to turn the gas back on. Report broken utility lines to authorities. ■

Risk Exposure Analysis

(At the recent Road and Street Maintenance Supervisor's School in Spokane, Jay Winter of the Washington County Risk Pool presented a succinct overview of a local government's perspective on analysis of its risk exposure. The following material is provided with the permission of Jay to the readers of the T² "Bulletin." Errors of interpretation are those of this editor and not of Jay or the County Risk Pool.)

The What, the Where, and the How

Quite simply, we must define the road defects (the what), high risk locations (the where), and the methodology for managing the risks (the how), which includes identifying, measuring, and suggesting treatments.

The Roadway Defects

A defect can be defined as a physical condition or characteristic that creates potential hazards for the users.

Road users problems can be created by various defects including: malfunctioning traffic signals, down regulatory signs, shoulder drop-offs, roadside objects in close proximity to the traffic, guardrail needs, and others.

Knowledge of Defects

Only through an effective risk management system can we hope to (1) properly identify defects, (2) provide a "notice of defect," and (3) implement a system design that corrects the problems in a timely manner.

Agency Objectives

All agencies have three objectives in common with the risk exposure analysis.

1. Improve roadway safety.
2. Reduce the agency's exposure and loss.
3. Prepare for unavoidable liabilities.

Jay closed with a quote worth remembering from Professor Tapan Datta, P.E., from Wayne State University, Michigan.

"The fear of identifying a problem is not only baseless but also raises the question of ethics for engineers. If we do not identify a roadway related defect and do nothing about it before crashes occur, the plaintiff's expert witness will do it for us." ■

NCHRP Projects Selected for 1997

The American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Research met in March and selected the new projects for the National Cooperative Highway Research Program in fiscal year 1997.

- 1-35 Guidelines and Procedures to Aid State Highway Agencies in the Development of Pavement Performance Trends
- 1-37 Development of the 2002 AASHTO Guide for the Design of Pavement Structures
- 2-21 Economic Implications of Congestion
- 2-22 Needs in Communicating the Relationships Between Transportation Investment and Economic Growth
- 4-25 Automation of Materials Testing
- 8-34 Major Investment Studies: Process Development Including Coordination with NEPA Requirements
- 9-11 Verification Test Procedures for QC/QA Programs for Hot-Mix Asphalt Construction Using Contractor Quality Control Testing
- 9-12 Adaptation of SUPERPAVE Binder Tests to Recycled Asphalt Pavement Designs
- 9-13 Evaluation of Water Sensitivity Tests

- 10-50 Methods of Rehabilitating Rigid Pavements Concurrent With Heavy Traffic
- 10-51 Performance-Related Tests for Elastomeric Bridge Bearings
- 10-52 Performance Tests for Modular Bridge Deck Joints
- 10-53 Condition Evaluation of Prestressed Strands in Bridges
- 10-54 Quality-Based Performance Rating of Contractors and Suppliers for Prequalification and Bidding Purposes
- 11-7 A Feasibility Assessment of a National Reporting System for Highway Tort Claims Made Against Governmental Entities
- 12-46 LRFD-Related Revision of the AASHTO Manual for Condition Evaluation of Bridges
- 12-47 Redundancy in Highway Bridge Superstructures
- 15-16 An Evaluation of Superelevation and Transition Design and Operations Associated with Horizontal Curvature
- 17-15 Safety on Over-Capacity Rural and Semi-Urban Two-Lane Highways
- 17-16 Accident Warrant for Traffic Signals

- 17-17 Development of Guidelines to Improve Safety During Nighttime Construction of System Preservation Work
- 18-5 Optimization of Dry Kiln Cement Properties for Concrete Durability
- 22-14 Assessment of Updating Needs for the Procedures for the Performance Evaluation of Roadside Safety Features
- 24-9 Static and Dynamic Lateral Loading of Piles and Pile Groups
- 25-13 Assessments of Impacts of Highway and Bridge-Deck Runoff Water Contaminants on Receiving Waters

Contingent on Availability of Funds

- 4-26 Rapid, Automated Method for Determining a Complete Aggregate Gradation
- 21-6 Applying Advanced Technology Particle-Size Analyzer to Soil Sizing and Characterization

Research is expected to begin early in 1997. Questions may be addressed to Crawford Jencks, manager, NCHRP Cooperative Research Programs Transportation Research Board, National Research Council, 2101 Constitution Avenue NW, Washington, D.C. 20418 (telephone 202-334-3224). ■

Excerpted with permission from TR News/84, May-June 1996, Transportation Research Board, National Research Council, Washington, D.C.

The Southwest Washington Inter-Agency Cooperative — Winning With GEM

(Editors Note: Doing more with less is impacting all of us. At the recent Road and Street Maintenance Supervisor's School in Spokane, a session on interagency cooperation included an interesting, exiting, and timely presentation on partnering among ourselves. The following information is extrapolated from a presentation by Bruce Cross, Deputy Director of Public Works of Clark County. Others may benefit from similar associations and should contact Bruce at (360) 699-2446.

According to Bruce Cross, several agencies met in 1993 to create an association that shared a common goal of increasing efficiency in government. The original mission statement is valid today: "providing a cost-effective result to the community by sharing services and facilities."

Some examples of accomplishments by GEM which stands for Ground, (and Buildings), Equipment, and Maintenance are as follows:

1. A small city gets two portable two-way radios on indefinite loan from the county.
2. A county hosts flagger certification class for all GEM members employees.
3. County uses a school district facility and catering service for its annual employee recognition night.
4. County provides, under contract, paint stripping services to other jurisdictions.
5. Transit authority provides bus service to other agencies for tours.
6. Members meet to coordinate county wide snow plowing.
7. School district and city share different (gas vs. diesel) emissions testing equipment and expertise.
8. County shares fueling facilities with other agencies.
9. Two cities jointly purchase and share street equipment, e.g., sweepers, vacuum truck.
10. Materials purchases "piggy backed" by other agencies.
11. State and city team up to correct an eroded ditch.
12. Agencies make surplus equipment available to other GEM agencies.
13. Exchange of knowledge and experiences.
14. City and school district share various pieces of equipment.

GEM members continue to meet and explore other ways in which they can derive benefits. Some ideas on the horizon include:

1. A regional sign shop.
2. A common sharing of a maintenance facility between county and state forces.
3. A shared vector waste decant facility.
4. More joint training sessions.
5. More shared fuel facilities.

Present participants in the Southwest Washington Inter-Agency cooperative includes five school districts, seven cities, two towns, one county, two fire districts, one transit agency, a sewer district, two ports, Washington State DOT and State Patrol. Other have expressed interest in joining this active groups. ■

AA in Public Works — Up and Running

Working with a broad base committee and a smaller task force of this committee for approximately one year, the T² Center Director is happy to report that an Associate of Technical Arts in Public Works (ATAPW) has started at South Puget Sound Community College. Supplemental

classes are being offered at Bates Technical College in Tacoma.

With the help of an advisor, a student majoring in Public Works may choose a sequence of electives resulting in a customized focus for the degree. Potential emphasis areas include: (1) administration

and management; (2) planning; (3) water and waste water; (4) construction, maintenance, and inspections; (5) surveying, mapping, and GIS; or (6) ground and building maintenance.

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August 10-14, 1997

The Conference

Organized under the auspices of the International Society for Asphalt Pavements (ISAP), the conference is the eighth in the series known colloquially as the "Ann Arbor Conferences." Begun in 1962 at the University of Michigan in the city of Ann Arbor, alternate conferences have been held there and in Europe (London, Delft, and Nottingham) at five-year intervals. These conferences have presented the latest development in the mechanistic approach to flexible pavement design and rehabilitation, with emphasis on high quality research and its implementation into practice. The 1997 conference will cover a broad field to encourage cross-fertilization of ideas between design and materials engineers, researchers, suppliers, and paving contractors.

Scope

The conference will embrace research and practice with respect to design, construction, and performance of flexible pavements. The 1997 conference will provide a forum for discussion of leading research work, encourage presentation of case studies demonstrating the implementation of research into practice, and foster discussion on producing better performing and cost-effective flexible pavements. The technical program will last four days and will build on the strong traditions of prior conferences. Plenary sessions, parallel paper, and workshop sessions as well as poster sessions will enable all participants to become involved and benefit from the conference. Prior to the official start of the conference, several one-day to half-day mini-course sessions will be held in topics such as mechanistic design, construction considerations, etc.

Eighth International Conference On Asphalt Pavements

Seattle Washington USA

Conference Schedule

Invitation to Exhibits	July 31, 1996
Invitation to Session Chairs and Tutorial Speakers	November 30, 1996
Final Program mailed	January 31, 1997
Proceeding mailed	June 23, 1997
Conference dates	August 10-14, 1997

Address Inquiries to:

8th International Conferences on Asphalt Pavements
UW Engineering Professional Programs
3201 Fremont Avenue North
Seattle, WA 98103 USA
Phone (206) 543-5539
Fax (206) 543-2352

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As far as we can determine, this is the first Associate of Arts in Public Works in the country. It provides an opportunity for people to prepare themselves for successful careers in serving the public via public works. Those interested in design areas can

take advantage of existing associate of arts programs in civil engineering and civil engineering technology which already exists throughout the state.

The new program has the endorsement of numerous associations and

each has promised to promote it. This is especially crucial in its infancy. Information on the new ATAPW can be obtained from your T² Center or by contacting, SPSCC at (360) 754-7711 Ext. 211 or 359, Bates at (206) 596-1504. ■

Training: What It Can Do For You

By Kathy L. Des Roches

In our society, new technologies are developing so rapidly, and in such large volume, that only a few can keep up with them.

The mission of the Technology Transfer (T²) Centers and Local Technical Assistance Program (LTAP) is to sort through these changes and transfer the useful information to road managers and their crews. One of the most effective ways of transferring information is through training.

Seminars, workshops, and on-the-job training enables people to find practical applications of information. Knowledge and applications learned from training provide benefits at three levels: the agency, the manager, and the individual

Benefits to Agencies

A well-trained staff or crew knows and understands local, state, and federal regulations. According to Sheldon Morgan, the Director of Public Works in Gilford, New Hampshire, "it [is] critical [that] employees stay current on rules, regulations, and procedures." Through training, crews learn how to meet required standards which may change because of federal guidelines and/or state law.

Training reduces costly turnover. Trained employees become qualified for promotions and are more likely to stay with the agency. When vacancies occur, a department with a training program tends to attract new employees.

Training saves money by decreasing mistakes and improving the quality of a crew's work. Crews work smarter when they understand why things are done certain ways.

Benefits to Managers

A manager with a trained staff has more time to manage. A trained crew can be left on a job site permitting the manager to attend to administration, public relations, or other managerial details. Training improves employee's safety practices and their ability to respond to emergencies. Skills training helps the manager decrease the effects of personnel shortages, including those created by vacations and illness.

Well-trained staff and crew members provide indirect benefits to the manager. They can provide valuable suggestions for problem solving, saving time, and money.

Trained employees can help set standards for evaluating their own performance. Morale is higher. The trained employee feels involved.

Benefits to the Individual

Highly trained employees feel good about themselves as well as their work. They have higher morale and confidence in their knowledge and abilities. They seek promotions and are motivated to gain more knowledge and skill. It feels great to be "on the cutting edge."

In short, people enjoy their jobs more when they know what they are doing, and they know they are doing it well.

When Is Training Needed?

Training is needed for the benefits described above and essential when any of the following occur:

- New methods or work procedures are started,
- Goals are not met,
- Employees lack a sense of purpose,
- Costs of operations are increasing without apparent reason,
- Quality of service is declining,
- Accidents are increasing,
- Staff or crew pride is lacking,
- Complaints and grievances are excessive,
- Workers are asking many questions about the job,
- High turnover and/or absenteeism, or
- Experienced employees are promoted or leave.

Making Training Effective

To get the maximum benefits from training, managers should ensure that employees understand what they can expect to learn and their knowledge will be used. Thus prepared, they will absorb more information and develop more ideas about how to apply it. ■

(Reprinted with permission from Kathy L. Des Roches, Program Assistant of the New Hampshire T² Center)

Free Publications

For Washington recipients only.

Name

Agency

Address

City and Zip

Phone

Check those items you would like to order.

- ☐ LTAP News, 1993
CD ROM listing of major articles from T2 Center newsletters from across the country. Must have Microsoft Windows, a CD ROM drive, and color monitor (IBM compatible only).
- ☐ Highway Utility Guide, FHWA
- ☐ Scrap Tire Utilization Technologies, NAPA
- ☐ State-of-the-Art Survey of Flexible Pavement Crack Sealing Procedures in the United States, CRREL (1992)
- ☐ Maintenance of Aggregate and Earth Roads, NWT² Center (1994 reprint)
- ☐ International State-of-the-Art Colloquium on Low-Temperature Asphalt Pavement Cracking, CRREL
- ☐ The Engineer's Pothole Repair Guide, CRREL
- ☐ Geotextile Selection and Installation Manual for Rural Unpaved Roads, FHWA
- ☐ Municipal Strategies to Increase Pedestrian Travel, Draft 1994, Rhys Roth, Energy Outreach Center
- ☐ Guide to Safety Features for Local Roads and Streets, FHWA (1992)
- ☐ Family Emergency Preparedness Plan, American Red Cross, et.al.
- ☐ Fish Passage Thru Culverts, USDA, FHWA, 1990
- ☐ Local Low Volume Roads and Streets, ASCE, 1992
- ☐ Snow Fence Guide, SHRP
- ☐ The Superpave System – New Tools for Designing and Building More Durable Asphalt Pavements, FHWA
- ☐ A Guide to the Federal-Aid Highway Emergency Relief Program, USDOT, June 1995

Workbooks and Handouts from T² Center Workshops

- _____ Planning and Implementing Pedestrian Facilities in Suburban and Developing Rural Areas, TRB 1987
From the workshop "Planning and Design of Pedestrian Facilities."
- _____ Handbook for Walkable Communities, by Dan Burden and Michael Wallwork
From the workshop "Planning and Design of Pedestrian Facilities."
- _____ Traffic Calming: A Guide to Street Sharing
From the workshop "Planning and Design of Pedestrian Facilities."
- _____ Techniques for Pavement Rehabilitation
From the workshop

Brief (One-to ten-page) Handouts

- _____ Asphalt Pavement Recycling
- _____ Eye and Face Protection: Safety Goggles
- _____ Individual Productivity – Understanding What Makes It Happen
- _____ Know the Dangers of Confined Spaces
- _____ Mitigating Road Hazards
- _____ One-Minute Stress Beaters
- _____ Operator Daily Maintenance of Motor Graders
- _____ Roadway Safety: Where Does it Rank on Your List of Priorities?
- _____ Standing on Your Own Two Feet: And Other Reasons to Use Foot Protection
- _____ Working with Pesticides
- _____ Tool Tips
- _____ Tips for Reducing Tort Liability (articles from various sources)
- _____ How to Coach a Winning Team
- _____ Are You at Risk for CTS?

Orders may be faxed, mailed, or phoned to Laurel Gray

Phone: (360) 705-7386, Fax: (360) 705-6858

Mailing Address: NWT² Center, WSDOT/TransAid, P.O. Box 47390,
Olympia, WA 98504-7390

WIC — Benefits Without Obligation

By Ed Oliphant

Washington Interagency Cooperative began in late 1986 as a loose informal network of road and street supervisors in the south Puget Sound area. Its original name was South Puget Sound Street Supervisors. The purpose of this association was to explore ways in which services between agencies could be coordinated to the benefit of everyone.

A seemingly endless array of benefits were possible without discernible down sides. What started as a way getting other ideas for solutions to common problems, became a much larger coordination of services between government agencies at all levels. We now realize that everyone wins (all participating agencies and the taxpayer) when there is collaboration of government services. An example of this is the following case.

The Problem: Intercity Transit in Thurston County was financially struggling to keep its bus stops sanded by purchasing commercial sand and spreading it with a small sander. They approached Thurston County Road Maintenance Division for assistance as the county's rock crushing operation had a bi-product that was used for sanding, however, was located 12 miles out of town and hence too far to be efficient.

The Solution: The city of Tumwater provided a stockpile site and loader services. Thurston County Road Maintenance hauled their crushing bi-product to the Tumwater stockpile. Intercity Transit sanded its bus stops from that stockpile site.

The Result: Intercity Transit provided safety for its buses not only at bus stops, but also at hazardous locations such as hills, curves, intersections, and bridges on the bus routes. Thurston County, city of Tumwater, city of Olympia, and city of Lacey were assisted in their snow and ice responses with the coverage of many urban and suburban hazardous location by Intercity Transits sanding patterns.

The Win/Win: All participating agencies were winners, two nonparticipating agencies were winners, and the taxpayers and traveling public were winners through lower costs and increased services.

There are now member agencies from federal, state, county, city, utility district, and school districts from all over the state of Washington and interest has been express from Idaho.

Currently benefits realized through this process include: a new pilot AA in Public Works degree*, cooperative equipment specification writing and purchases, access to a large pool of agency surplus, an Internet home page, and a large diverse brain pool of solutions so you don't have to "reinvent the wheel" every time you do something new.

For more information about the Washington Interagency Cooperative, contact: Ken Corcoran at (360) 753-8109 or Ed Oliphant at (360) 978-4470.

(*See related article in this issue.)

New AASHTO Publication

AASHTO has just released the "1996 Guide for Contracting, Selecting, and Managing Consultants in Preconstruction Engineering."

The use of consultants by state transportation agencies has increased sharply over the past decade. This guide, produced by AASHTO's Highway Subcommittee on Design, is intended to assist states in developing their consultant program, organizing and training staff, selecting consultants, developing consultant contracts, and managing the consultant program and workforce.

The guide was developed by surveying state programs and identifying potential opportunities for improvement and change.

Copies of the book have been sent to member departments. Additional copies can be obtained by contacting AASHTO Headquarters. The price is \$18 for AASHTO members, and \$22 for nonmembers. The order code is GCPE (phone (202) 624-5800).

Source: AASHTO Journal, September 1996

Work Smarter Not Harder: *Expand Your Knowledge*

Use WSDOT's Library – A Free T²
Resource. Information on:

- | | |
|--------------|----------------|
| ❖ Planning | ❖ Construction |
| ❖ Design | ❖ Maintenance |
| ❖ Management | ❖ Materials |

(360) 705-7750



Opportunities to Enhance Your Skills

For more information or training needs not listed in this Bulletin, contact the Northwest T² Center.

Classes and Workshops

NWT² Center, WSDOT
(360) 705-7386, Fax (360) 705-6858

SWIBS Training. January 14-16, 1997, WSDOT Materials Lab, Tumwater. No fee.

Engineering Concepts for Bridge Inspectors. January 27-31, 1997, WSDOT Materials Lab, Tumwater. No Fee.

Safety Inspection of In-Service Bridges. February 24-28 and March 10-14. Two-week class at WSDOT Material's Lab, Tumwater. No fee.

WSDOT, Staff Development Training Opportunities
(360) 705-7386, Fax (360) 705-6858

Call Laurel Gray in the T² Center to register.

If the class is full or not scheduled at this time we will put your name on a wait list for future classes.

Bridge Structures Inspection (ACM). January 7-9, Spokane; January 28-30, Yakima; March 11-13, Seattle. No fee.

Nuclear Gauge Operator Qualification (ALG). April 8, Lakewood. No fee.

Nuclear Gauge Embankment/Surfacing/Pavement Application (ANQ). April 9, Lakewood; March 20, Spokane; April 10, Spokane. No fee.

Nuclear Gauge Overview for Supervisors (ANE). April 10, Lakewood. No fee.

Drainage Inspection (ACF). January 15, Tacoma; February 7, Port Angeles; January 16, Spokane; March 15, Seattle. No fee.

WSDOT Environmental and Engineering Services
Contact Jim Sundahl at (360) 705-7483

Certification in Construction Site Erosion and Sediment Control (BPW). February 11-12, March 11-12, Wenatchee; January 16-17, February 18-19, March 18-19, Seattle. For contractors, consultants, and local agencies dealing with state contracts. \$100.

OSHA Training Center
(800) 326-7568,
Fax (206) 685-3872

OSHA Standards for the Construction Industry, OSHA 510. January 13-16, 1997, May 5-8, 1997, Seattle OSHA Training Center. Bring a current copy of OSHA Construction regulation, 29 CFR 1926 to class. \$525. 4 days.

Trainer Course, OSHA Standards for the Construction Industry, OSHA 500. January 20-23, 1997, May 12-May 15, 1997, Seattle OSHA Training Center; March 17-20, 1997, Portland Community College. Prerequisites include successful completion of course 510, and five years of construction safety experience. Bring a current copy of OSHA Construction regulation, 29 CFR 1926 to class. \$525.

Trainer Course, OSHA Standards for General Industry, OSHA 501. February 17-20, 1997, June 9-12, 1997, Seattle OSHA Training Center; April 7-10, 1997, July 21-14, 1997, Portland Community College. Bring a current copy of OSHA Regulation, 29 CFR 1910 to class. \$525.

OSHA Guide to Industry Hygiene, OSHA 521. March 3-6, 1997 Portland Community College. Prerequisite Course 501. Bring a current copy of OSHA Regulation, 29 CFR 1910 to class. \$495.

University of Washington Engineering Professional Programs
(206) 543-5539

Drilling and Blasting Techniques for Construction, Quarrying, Open Pit Mining, Trenching, and Pipelines. January 27-31. On campus.

EIT Refresher. Mondays and Wednesdays 6:30-9:00 p.m. February 24-April 2, 1997.

CE Refresher Course. Tuesdays and Thursday 7-9:30 p.m. March 4-April 8, 1997.

Continued on page 14

TRANSPEED-UW
(206) 543-5539

Upcoming TRANSPEED classes for 1997. Details are being developed.

- Legal Liability
- Basic Roadway Pavement Design
- Advanced Highway Capacity Analysis for Engineers and Planners
- Construction Inspection of Public Works Projects
- Public Works Construction Project Management
- Manual on Uniform Traffic Control Devices
- Roadway Value Engineering
- Inspection of Existing Culverts
- Effective Implementation of Pavement Management Systems
- GIS Applications in Transportation
- Basic Highway Capacity Analysis for Engineers and Planners
- Advanced Roadway Pavement Design
- Traffic Calming: Techniques and Management
- Roadway Geometric Design
- Roadway Safety: Analysis, Evaluation, and Programming
- Hydraulic Design of Roadway Culverts
- Pavement Rehabilitation
- Traffic Signal Design Workshop

**King County Department of
Transportation Road Services Section**
Jon Cassidy (206) 296-8148

Effect of Road Shoulder Treatment on Highway Runoff. January 23, 1997, **Shoreline**. This class will review research results of three types of shoulder materials tested on a heavily traveled road: conventional asphalt, gravel, and porous asphalt. Each shoulder type was evaluated for its impacts on runoff quantity and quality compared to runoff from the driving lanes. The study investigates the role that road shoulders play in the storm water runoff process. No fee.

University of California-Berkeley
(510) 643-1492

Implementing Quality Principles in the Public Sector. December 9-10, Seattle. \$795.

Law Seminars International
(206) 621-1938

Endangered Species Act. January 23-24 1997, Seattle.

Washington Water Law. March 27-28, 1997, Seattle.

Wetlands Washington. March 8, 1997, Seattle.

ASCE
1-800-548-2723

Roadside Design. March 6-7, 1997, Seattle.

**Washington State Department of
Personnel (DOP)**
(360) 586-2720

(Classes open to state and local agency personnel based upon space available. Other classes are offered in Tri-Cities, Vancouver, Walla Walla, Wenatchee, and Yakima. Contact DOP for their latest catalog.)

Leadership Skills That Work. April 25, **Olympia**; February 24, **Tacoma**.

Project Management. January 23-24, March 20-21, **Olympia**.

Supervising from a Distance. January 17, **Olympia**.

Time Management. February 4, March 21, April 4, **Olympia**; February 12, **Tacoma**.

Entry Management Development. April 28-30, **Spokane**.

Violence in the Work Place. March 3, **Tacoma**.

Computer Programs

The following computer programs are available without charge by sending a formatted high density diskette for each program requested to: NWT² Center, WSDOT TransAid, NW, P.O. Box 47390, Olympia, WA 98504-7390. The files will be copied onto your diskettes and returned to you. Descriptions and requirements of the programs are on the T² Center's web site at <http://www.wsdot.wa.gov/transaid/nwt2.htm>. These programs may also be downloaded from the Internet.

Continued on page 15

Design Cost Estimate. A software database program that calculates cost projections based on standard items.

Materials Approval Tracking. A software program designed to track materials data, need, status, and approval of any materials sampling and documentation needed for approval.

HyperCalc. A shareware utility for converting between metric and English units.

Force Account Macros. A series of ready-made Excel spreadsheets and macros to save you time on daily force account calculations and reports, including wage and equipment rates.

APWA CAD Symbol Standards and Menus. A public domain program of standard AutoCAD symbols developed by the Washington Chapter of APWA for use with AutoCAD release 12.

Conferences and Meetings

47th Annual Road Builders' Clinic. March 11-13, 1997, Coeur d'Alene, Idaho.

NACE Annual Meeting. March 22-27, 1997, Birmingham, Alabama.

National Seminar on Advanced Composite Material Bridges. May 5-7, 1997, Washington, D.C. (FHWA).

TRIBs 3D in Symposium and Workshop. May 18-21, 1997, Minneapolis, Minnesota.

Northwest Transportation Conference. February 5-7, 1997, Corvallis, Oregon.

1997 International Highway-Rail Grade Crossing Safety Conference. July 19-23, 1997, Madison Hotel, Seattle. Contact (409) 845-5817.

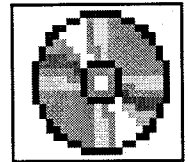
North American Trenchless Technology No Digging. April 18-21, Seattle, (312) 644-0828.

Northwest Transportation Conference. February 5-7, 1997, Corvallis, Oregon. A multi-agency seminar sponsored by OSU and supported by ODOT, FHWA, BLM, USFS, AAA, and others.

Manuals on CD-ROM

TransAid is working with the Finance and Administration Service Center to place all of the WSDOT manuals on CD-ROM and for routine distribution semiannually. The first disks are planned for distribution in December and will include:

- Local Agency Guidelines (LAG) Manual
- A Guide for Local Agency Pavement Managers
- StreetWise-A Simplified Local Agency Pavement Management System
- Washington Modification to the MUTCD
- WSDOT Standard Specifications
- WSDOT Highway Runoff Manual
- WSDOT Construction Manual
- The Gist of GIS



Walkable Communities: Designing for Pedestrians

Available Soon: Video presentation of the Dan Burden workshop presented October 10, 1996 at the Footprints and Bike Tracks Pedestrian and Bicycle Safety Conference in Seattle.

Mr. Burden is a nationally recognized expert on creating livable cities. His presentation is for designers and planners, mayors and city councils, department of transportation officials, neighborhood associations. This enjoyable video will provide numerous and thought provoking ideas from an expertise gained by 25 years of experience in the pedestrian field.

The six-hour series of videos will be available by the end of December. If interested, please contact the T² Center at (360) 705-7386, for the set of four tapes.

Every six months, new issues will be distributed with all manuals updated, new manuals added as they become ready electronically, and new functions added, such as hypertexting and linking of topics between manuals. The CD-ROMs will reduce labor, publication and mailing costs, times and provide added functionality. The CD-ROMs will include standard WSDOT forms that can be used. ■

Source: WSDOT TransAid Focus Report, September 1996

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T² Web Site

<http://www.wsdot.wa.gov/transaid/nwt2.htm>

Toll Free Training Number

1-800-973-4496

Bulletin

The Technology Transfer Center (T²) Program is a nationwide effort financed jointly by the Federal Highway Administration (FHWA) and individual state departments of transportation. Its purpose is to translate into understandable terms the latest state-of-the-art technologies in the areas of roads, bridges, and public transportation to local highway and transportation personnel.

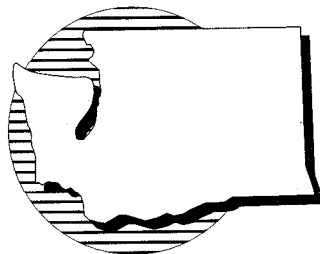
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**Washington State
Department of Transportation**
TransAid Service Center



U. S. Department of Transportation
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Northwest Technology Transfer Center
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